College Prep Algebra Name_____
Worksheet Chapter 7 & 8

WRITE ALL OF YOUR ANSWERS ON THE WORKSHEET. SHOW WORK CLEARLY AND NEATLY ONLY ON THE FRONT OF A SEPARATE SHEET OF LOOSE- LEAF NOTEBOOK PAPER FOR ALL PROBLEMS THAT REQUIRE WORK. STAPLE WORK TO THE BACK OF THE WORKSHEET.

Find the value of the expression for the given replacement value.

1) $\frac{x-1}{x+5}$; $x = -4$ 1) _____

2) $\frac{x+3}{-3x+2}$; $x = -2$ 2) _____

3) $\frac{x^2-10x+5}{x^2+2x-1}$; $x = 8$ 3) _____

4) $\frac{a^2}{1-a^2}$; $a = 9$ 4) _____

Solve the problem.

5) A formula for the focal length of a lens is 5) _____
$f = \frac{ab}{b+a}$
Calculate f (the focal length) for a = 16 cm and b = 12 cm.

6) A gas law in chemistry says that $\frac{PV}{T} = \frac{pv}{t}$. If T = 340, t = 390, V = 12, P = 20, and v = 5, find 6) _____
the value of p. Round to the nearest thousandth.

Find all values that make the expression undefined.

7) $\frac{9}{z+5}$ 7) _____

8) $\frac{r-4}{8}$ 8) _____

9) $\frac{x^3+49x}{3x-15}$ 9) _____

10) $\frac{7y-5}{y^2-81}$ 10) _____

11) $\frac{x^2-36}{x^2+8x+12}$ 11) _____

12) $\frac{x^2-4}{x^2-9x+18}$ 12) _____